

September 2003

Newsletter

In the Month of September...

Tuesday, September 2- First day of Classes

Sunday, September 7- CES Fireside: President Thomas S. Monson

Tuesday, September 9- Presidential Installation Ceremony

Tuesday, September 16- Devotional: Dance Assembly

Tuesday, September 23- Forum: Helen Thomas, syndicated columnist for Hearst Newspapers

Tuesday, September 30- Devotional: John W. Welch, Professor of Law

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The College of Physical and Mathematical Sciences

CALCON 2003

Two BYU professors, Juliana Boerio-Goates of Chemistry and Biochemistry and John Oscarson of Chemical Engineering hosted CALCON 2003, a joint meeting of the Calorimetry Conference and the Japan Society of Thermal Analysis and Calorimetry on the Brigham Young University-Hawaii campus.

More than 120 scientists from the U.S., Japan, Canada, England, France, Germany, Poland, and Australia converged on BYU-Hawaii campus for four days in late July. This was the 58th

annual meeting of the Calorimetry Conference and the 39th for the Japanese society, but it was the first time the two groups had met together. Attendees came from research universities, government laboratories and private industries.

BYU has traditionally had a strong contingent of chemistry and chemical engineering faculty who participate in the leadership of the Calorimetry Conference. One of the three awards given by the conference is named after James J. Christensen, who was a professor in the Chemical Engineering Department until his death. This year

the Christensen Award address was given by J. Bevan Ott, an emeritus professor of chemistry who was a research colleague of Professor Christensen. Five other BYU faculty and two graduate students presented papers. As part of the social program, participants and more than 50 accompanying persons visited the Polynesian Cultural Center.

Details of the Conference can be found at www.calcon.org

Patti Collings and Lynne Nielsen Hold Workshop

Patti Collings and Lynne Nielsen taught a week-long workshop for approximately 14 beginning AP Statistics teachers at the Intermountain AP Institute held at the University of Utah campus in August.



Department of Statistics to Host BAPS Conference

In conjunction with the ASA/NCTM Joint Committee (American Statistical Association and National Council for Teachers of Mathematics), the Department of Statistics will offer a one-day seminar, Beyond Advanced Placement Statistics (BAPS), for experienced AP Statistics teachers. The course will be held Saturday, September 20, 2003, from 9 a.m. to 5 p.m. in Room 301

TMCB. Registration for the first 25 people will be paid for by a grant. Attendance will earn 0.8 units of CE credit.

The course is divided into four sessions led by faculty from the Department of Statistics and a special invited guest, Roxy Peck, who is currently the chief reader for AP Statistics. Sterling Hilton will present "Analysis of Variance"; Shane Reese, "Bayesian Data Analysis"; Wayne

Larsen, "Linear Combinations of Random Variables"; and Roxy Peck, "Multiple Regression."

Registration forms can be obtained in the Department of Statistics, 230 TMCB or by contacting Lynne Nielsen at lynne.Nielsen@byu.edu or (801) 422-9202.

ASA/JSM Meeting Held in San Francisco, California

Twelve members from the Department of Statistics attended the Joint Statistical Meeting of the American Statistical Association in San Francisco, California August 3-7, 2003. Nine of the twelve participants presented papers, two of which were invited papers. The department also hosted an informal get-together at the Golden Gate Ward for approximately 40 LDS statisticians attending the conference. It was enjoyable to meet and interact with new and former colleagues and enjoy the refreshments provided.



College Publications

Department of Chemistry & Biochemistry

D.S. Soane, D.A. Oxford, M.R. Linford, D.B. Millward, W. Ware, Jr., L. Erskine, E. Green, and R. Lau, "Nanoparticle-based Permanent Treatments for Textiles," United States Patent No. 6,607,994 B2, August 19, 2003.

R.G. Harrison, J.L. Burrows, and N.K. Dalley, "Incorporation of Transition and Group I Metal Ions into the Channels of Materials Composed of Metal-assembled Cages," *Inorganica Chimica Acta*, **351**, 399-403 (2003).

Y.-Y. Lua, M.V. Lee, W.J.J. Fillmore, R. Matheson, A. Sathyapalan, M.C. Asplund, S.A. Fleming and M.R. Linford, "Amine-reactive Monolayers on Scribed Silicon with Controlled Levels of Functionality: Reaction of a Bare Silicon Surface with Mono- and Diepoxides," *Angew. Chem. Int. Ed.*, **42**, 4046-4049 (2003).

J.L. Price, E.C. Sorenson, E.D. Merkley, B.R. McRae, and E.M. Woolley, "Thermodynamics of proton dissociations from aqueous L-valine and L-2-amino-n-butanoic acid: apparent molar volumes and apparent molar heat capacities of the protonated cationic, neutral zwitterionic, and deprotonated anionic species at temperatures $278.15 < T / \text{K} < 393.15$, at molalities $0.015 < m / \text{mol} \cdot \text{kg}^{-1} < 0.67$, and pressure $p = 0.35 \text{ MPa}$." *Journal of Chemical Thermodynamics*, **35**, 1425-1467, 2003.

Department of Computer Science

J. L. Stimpson and M.A. Goodrich, "Learning To Cooperate in a Social Dilemma: A Satisfying Approach to Bargaining," *ICML 2003 Proceedings* Washington D.C., USA, August 2003.

J. L. Stimpson and M. A. Goodrich, "Nash Equilibrium or Nash Bargaining? Choosing a Solution Concept for Multi-Agent Learning" *Proceedings of the 2003 AAMAS Workshop on Game Theoretic and Decision Theoretic Agents*, Melbourne, Australia, July, 2003.

J. Howlett, M.A. Goodrich, and T. McLain, "Learning Real-Time A* Path Planner for Sensing Closely-Spaced Targets from an Aircraft," *Proceedings of the AIAA Guidance, Navigation, and Control Conference*, Austin, Texas, USA, August 2003.

J. W. Crandall and M. A. Goodrich, "Measuring the Intelligence of a Robot and Its Interface," *Proceedings of PERMIS 2003*, September 2003.

D. R. Olsen, Jr., and M. A. Goodrich, "Metrics For Evaluating Human-Robot Interactions," *Proceedings of PERMIS 2003*, September 2003.

D. J. Kennard and W. A. Barrett, "Just-In-Time Browsing for Digitized Microfilm and Other Similar Image Collections," *7th International Conference on Document Analysis and Recognition (ICDAR)*, 233-237, Edinburgh, Scotland, August, 2003.

H. Nielson and W. A. Barrett, "Consensus-Based Table Form Recognition," *7th International Conference on Document Analysis and Recognition (ICDAR)*, 906-910, Edinburgh, Scotland, August, 2003.

E. N. Mortensen, W. Yan, and W. A. Barrett, "Edge Modeling for Analysis and Manipulation of Object Boundaries," in *Proc. of Vision Interface (VI '03)*, 243-250, Halifax, Canada, June 2003.

D.W. Embley, D. Jackman, and L. Xu, "Attribute match discovery in information integration: exploiting multiple facets of metadata," *Journal of the Brazilian Computing Society*, Volume 8, Number 2, November 2002, 32-43.

D.W. Embley and W.Y. Mok, "On guaranteeing 'good' properties for XML, (with W.Y. Mok), *Proceedings of the 7th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2003)*, Volume IX, Orlando, Florida, 27-30 July 2003, 195-198.

Linus Kwong and Yiu-Kai Ng, "Performing Binary-Categorization on Multiple-Record Web Documents Using Information Retrieval Models and Application Ontologies," *Journal of World-Wide Web*, Vol. 6, No. 3, September 2003, Kluwer Academic Publishers, pp. 281-303.

David K. Vawdrey, Tore L. Sundelin, Kent E. Seamons, Charles D. Knutson. "Trust Negotiation for Authentication and Authorization in Healthcare Information Systems." *Proceedings of the 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Cancun, Mexico, September 17-21, 2003.

Department of Geology

B. R. Bickmore, K. M. Rosso, K. L. Nagy, R. T. Cygan and C. J. Tadanier, "Ab Initio Determination of Edge Surface Structures for Dioctahedral 2:1 Phyllosilicates: Implications for Acid-base Reactivity," *Clays and Clay Minerals*, **51** (4) p.359-371, 2003.

J. H. McBride and W. J. Stephenson, "Preface to Contributions to Neotectonics and Seismic Hazard from Shallow Geophysical Imaging," *Special Volume of Tectonophysics*, **368**, p.1-5, 2003.

J. H. McBride and W. J. Stephenson, Guest Editors, "Contributions to Neotectonics and Seismic Hazard from Shallow Geophysical Imaging," *Special Volume of Tectonophysics*, **368**, Issues 1-4, p.1-227, 2003.

J. H. McBride, A. J. M. Pugin, W. J. Nelson, T. H. Larson, S. L. Sargent, J. A. Devera, F. B. Denny, and E. W. Woolery, "Variable post-Paleozoic deformation detected by seismic reflection profiling across northwestern 'prong' of New Madrid Seismic Zone," *Tectonophysics*, **368**, p.171-191, 2003.

J. H. McBride, D. R. Kolata and T. G. Hildenbrand, "Geophysical constraints on understanding the origin of the Paleozoic Illinois basin and the Proterozoic eastern granite-rhyolite province USA," *Tectonophysics*, **363**, p. 45-78, 2003.

S. Marshak, W. J. Nelson and J. H. McBride, "Phanerozoic strike-slip faulting in the continental interior platform of the United States: examples from the Laramide Orogen, Midcontinent, and Ancestral Rocky Mountains." In: Storti, F., Holdsworth, R. E., and Slavini, F., eds., *Intraplate Strike-slip Deformation Belts*, Geological Society, London, Special Publications **120**, p. 171-196, 2003.

P. B. Anderson, K. McClure, T. C. Chidsey Jr., T. A. Ryer, T. H. Morris, J. A. Dewey Jr., and R. D. Adams, "Interpreted Regional Photomosaics and Cross Section, Cretaceous Ferron Sandstone, East-central Utah." *Utah Geological Survey Open-File Report*, **412**, compact disk, 2003.

Department of Mathematics

P. Korman, Y. Li, and T. Ouyang, "Perturbation of Global Solution Curves for Semilinear Problems" *Advanced Nonlinear Studies*, Volume 3, 289-299.

Department of Physics & Astronomy

M. Zhao, Y. Xia, J.P. Lewis, R. Zhang, "First-principles calculations for nitrogen-containing single-walled carbon nanotubes," *Journal of Applied Physics*, **94**(4) 2398-2402, 2003.

Tao Wen, Ji-Ping Ye, S.Q. An, Xian Xi Dai, JiXin Dai and W.E. Evenson, "Bose-Einstein condensation in confined geometry: thermodynamic mapping study", *Journal of Physics: Condensed Matter*, 15 (2003) 5511-5521.

Department of Statistics

T. R. Lee, and L.J. Wolfson, "The Census and the Overseas Population," *Election Law Journal* 2:3, pp. 343-366, 2003.

L.J. Wolfson, and T. R. Lee, "Utah's Census Battles: The Inside Story," *Chance*, **16** (3), 21-29, 2003.

